

AMENDMENTS TO THE CLAIMS

This listing replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A compound of the formula (I)



in which the substituents and indices have the following meanings:

X is O, NH, NR⁶ or S,

R¹ and R² are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl or optionally substituted alkoxy, alkenyloxy, aryloxy, alkylaryloxy, arylalkyloxy, or hydroxy

R³, R⁴, R⁵ and R⁶ are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl,

{B} is a straight-chain or branched substituent with (i) more than one organically polymerizable group that contains a C=C moiety, and (ii) at least 2 carbon atoms, ~~that contains and~~ no silicon atoms,

m is an integer from 0 to 20,

n is an integer from 1 to 20.

2. (Currently Amended) A compound of the formula (I)



in which the substituents and indices have the following meanings:

X is O, NH, NR⁶ or S,

R^1 and R^2 are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl or optionally substituted alkoxy, alkenyloxy, aryloxy, alkylaryloxy arylalkyloxy, or hydroxyl,

R^3 , R^4 , R^5 and R^6 are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl,

{B} is a straight-chain or branched substituent with (i) more than one organically polymerizable group that contains a C=C moiety, and (ii) at least 2 carbon atoms, ~~that~~ contains and no silicon atoms,

m is an integer from 0 to 20,

n is an integer from 1 to 20,

apart from:

[4-oxo-4-(2-propenylamino)butyl]phenylphosphinic acid ethyl ester, [4-oxo-4-(2-propenylamino)butyl]phosphonic acid diethyl ester; compounds of the formula

$(R^cO)_2P(O)CH_2CHR^aCONHCH_2NHCOCR^b=CR^cR^d$ with R^2 = methyl or butyl, R^a = H or methyl, R^b = H, CH_2CO_2H or methyl, R^c = H and R^d = H, methyl, $CONH_2$ or CO_2H ;

$CH_2=C(R^f)C(O)O(CH_2)_xO(CO)CH(R^g)CH_2-P(O)R^i(OR^k)$ and

$CH_2=C(R^f)CH_2O(CO)CH(R^g)CH_2-P(O)R^i(OR^k)$ with R^f and R^g = hydrogen or methyl, R^k = C_1 - C_{18} -alkyl, benzyl or phenyl, R^i = hydrogen or a C_1 - C_4 -alkyl and x = 1 to 30, and also compounds in which {B} exhibits one or more isolated or oligomerized isoprene group(s).

3. (Previously Presented) The compound of the formula (I) as claimed in claim 1, wherein the substituents R^1 , R^2 , R^3 , R^4 , R^5 and R^6 in each case comprise 1-6 carbon atoms for open-chain aliphatic groups and in each case comprise 6 to 12 carbon atoms for cycloaliphatic or aromatic groups).

4. (Previously Presented) The compound of the formula (I) as claimed in claim 1, wherein the substituents of the groups R^1 , R^2 , R^3 , R^4 , R^5 and R^6 are chosen from halogen, amino groups, oxygen-comprising substituents and/or sulfur-comprising substituents.
5. (Previously Presented) The compound of the formula (I) as claimed in claim 1, wherein R^1 and R^2 are both hydroxyl or that R^1 and R^2 are both optionally substituted alkoxy, alkenyloxy, aryloxy, alkylaryloxy or arylalkyloxy or that R^1 is optionally substituted alkoxy, alkenyloxy, aryloxy, alkylaryloxy or arylalkyloxy and R^2 is optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl or that R^1 is OH and R^2 is optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl or that R^1 and R^2 are both hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl.
6. (Previously Presented) The compound of the formula (I) as claimed in claim 1, wherein X is NH or NR^6 or oxygen.
7. (Previously Presented) The compound of the formula (I) as claimed in claim 1, wherein m is 0, 1, 2, 3 or 4 and/or that n is 1, 2, 3 or 4.
8. (Previously Presented) The compound of the formula (I) as claimed in claim 7, wherein m is 0 and/or that n is 1.
9. (Previously Presented) The compound of the formula (I) as claimed in claim 1, wherein {B} exhibits 2 to 50 carbon atoms and at least one C=C double bond as polymerizable group.
10. (Previously Presented) The compound of the formula (I) as claimed in claim 1, wherein {B} exhibits at least one vinyl, allyl, norbornene, glycidyl, acrylate, methacrylate, thioacrylate or thiomethacrylate group(s) or group(s) derived from (meth)acrylamides.
11. (Previously Presented) The compound of the formula (I) as claimed in claim 10, wherein {B} exhibits at least one, preferably at least two, norbornene, glycidyl, acrylate, methacrylate, thioacrylate or thiomethacrylate group(s) or group(s) derived from (meth)acrylamides and/or that X represents oxygen.

12. (Previously Presented) The compound of the formula (I) as claimed in claim 11, wherein X represents oxygen and/or that the substituent {B} comprises at least one Michael systems selected from acrylate, methacrylate and/or glycidyl group(s).

13. (Previously Presented) The compound of the formula (I) as claimed in claim 12, wherein {B} comprises a carbon backbone derived from an oligoalcohol, one or more of the hydroxyl functional groups of the oligoalcohol being esterified with one or more acrylate and/or methacrylate groups.

14. (Previously Presented) The compound of the formula (I) as claimed in claim 13, wherein the oligoalcohol exhibits a carbon backbone with three to 15 carbon atoms.

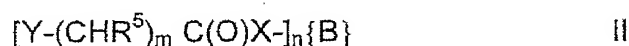
15. (Previously Presented) The compound of the formula (I) as claimed in claim 14, wherein the oligoalcohol is a di-, tri-, tetra- or pentaalcohol.

16. (Previously Presented) The compound of the formula (I) as claimed in claim 13, wherein the oligoalcohol is selected from the group consisting of glycol, glycerol, trimethylolpropane and pentaerythritol.

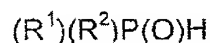
17. (Previously Presented) The compound of the formula (I) as claimed in claim 13, wherein the X is oxygen and can be understood as additional hydroxyl functional group of the oligoalcohol.

18. (Previously Presented) The compound of the formula (I) as claimed in claim 17, wherein {B} exhibits no additional groups, over and above the carbon backbone derived from an oligoalcohol and the acrylate and/or methacrylate groups esterified therewith.

19. (Previously Presented) A process for the preparation of the compound of the formula (I) as defined in claim 1, comprising reacting compounds of the formula (II)



with compounds of the formula (III)



III

20. (Previously Presented) The process as claimed in claim 19, wherein the substituents R^1 and R^2 represent C_1 - C_6 -alkoxy.

21. (Previously Presented) The process as claimed in claim 20 for the preparation of compounds with the formula (I) in which the substituents R^1 and R^2 represent hydroxyl, further comprising, subjecting the product of the reaction of the compound with the formula (II) with the compound of the formula (III) to hydrolysis.

22. (Previously Presented) The process as claimed in claim 19, further comprising reacting 1 mol of the compound with the formula (II), wherein n is greater than 1, with less than n mol of the compound with the formula (III), n having the same meaning as in formula (II), in order to obtain a mixture with a compound of the formula (I), in which n is greater than 1, and a compound of the formula (II), in which n represents 1 and in which the group {B} comprises $[Y-(CHR^5)_mC(O)X-]$.

23. (Currently Amended) A homopolymer of a compound of the formula (I)



in which the substituents and indices have the following meanings:

X is O, NH, NR^6 or S,

R^1 and R^2 are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl or optionally substituted alkoxy, alkenyloxy, aryloxy, alkylaryloxy, arylalkyloxy, or hydroxy,

R^3 , R^4 , R^5 and R^6 are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl,

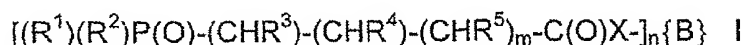
{B} is a straight-chain or branched substituent with (i) more than one organically polymerizable group that contains a C=C moiety, and (ii) at least 2 carbon atoms, ~~that~~ contains and no silicon atoms,

m is an integer from 0 to 20,

n is an integer from 1 to 20.

24. (Previously Presented) The homopolymer as claimed in claim 23, wherein the substituents R¹, R², R³, R⁴, R⁵ and R⁶ in each case comprise 1-6 carbon atoms for open-chain aliphatic groups and in each case comprise 6 to 12 carbon atoms for cycloaliphatic or aromatic groups.

25. (Currently Amended) A copolymer of different compounds of the formula (I)



in which the substituents and indices have the following meanings:

X is O, NH, NR⁶ or S,

R¹ and R² are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl or optionally substituted alkoxy, alkenyloxy, aryloxy, alkylaryloxy, arylalkyloxy, or hydroxyl,

R³, R⁴, R⁵ and R⁶ are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl,

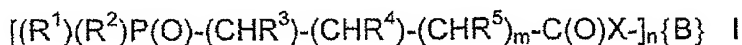
{B} is a straight-chain or branched substituent with (i) more than one organically polymerizable group that contains a C=C moiety, and (ii) at least 2 carbon atoms, ~~that~~ contains and no silicon atoms,

m is an integer from 0 to 20,

n is an integer from 1 to 20.

26.(Previously Presented) The copolymer as claimed in claim 25, wherein the substituents R^1 , R^2 , R^3 , R^4 , R^5 and R^6 in each case comprise 1-6 carbon atoms for open-chain aliphatic groups and in each case comprise 6 to 12 carbon atoms for cycloaliphatic or aromatic groups.

27. (Currently Amended) A copolymer formed by the use of monomer units of the formula (I) or of block polymer units constructed from monomers of the formula (I)



in which the substituents and indices have the following meanings:

X is O, NH, NR^6 or S,

R^1 and R^2 are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl or optionally substituted alkoxy, alkenyloxy, aryloxy, alkylaryloxy, arylalkyloxy, or hydroxy,

R^3 , R^4 , R^5 and R^6 are, independently of one another, hydrogen or optionally substituted alkyl, alkenyl, aryl, alkylaryl or arylalkyl,

{B} is a straight-chain or branched substituent with (i) more than one organically polymerizable group that contains a C=C moiety, and (ii) at least 2 carbon atoms, ~~that~~ contains and no silicon atoms,

m is an integer from 0 to 20,

n is an integer from 1 to 20.

28. (Previously Presented) The copolymer as claimed in claim 27, wherein the substituents R^1 , R^2 , R^3 , R^4 , R^5 and R^6 in each case comprise 1-6 carbon atoms for open-chain aliphatic groups and in each case comprise 6 to 12 carbon atoms for cycloaliphatic or aromatic groups.